

Description of a new *Marginella*: *Marginella martiae* from the East Coast Province, South Africa

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ABSTRACT Description of a new species, *Marginella martiae*, from the East Coast Province, South Africa. The new species is compared to *M. philipi*, S.G.Veldsman, 2013, *M. viljoenae* S.G.Veldsman, 2013, *M. scitula* Turton, 1932, *M. rubrocincta*, Turton, 1932 and *M. millardi* Lussi, 1993.

KEYWORDS *Marginella*, *martiae*, *philipi*, *viljoenae*, *scitula*, *rubrocincta*, *millardi*, East Coast Province, South Africa.

INTRODUCTION

After studying this group of *Marginella* from the East Coast Province (see Figure 1) intensely over the last couple of years, a couple of shells (all alike) were found that did not fit in with any of the current descriptions. These are described as a new species, *Marginella martiae* (Figure 2.1 and Figure 3) and compared to species closely related, such as:

Marginella millardi Lussi, 1993 (Figure 2.6) – discussed and illustrated in Lussi (1993), Veldsman, S.G. (2013d) and Lussi (2013);

Marginella philipi S.G.Veldsman, 2013 (Figure 2.5) – discussed and illustrated in Veldsman, SG (2013d);

Marginella rubrocincta Turton, 1932 (Figure 2.3) – discussed and illustrated in Turton (1932) and Veldsman S.G. *et al.* (2014);

Marginella scitula Turton, 1932 (Figure 2.2) – discussed and illustrated in Turton (1932) and Veldsman, S.G. (2013c);

Marginella viljoenae S.G.Veldsman, 2013 (Figure 2.4) – discussed and illustrated in Veldsman, S.G. (2013c).

All the above mentioned species occur from the Central East Coast Sub-Province to Algoa Sub-

Province, East Coast Province, South Africa (see Figure 1).

There are numerous other species included in this group of *Marginella*, such as:

Marginella albocincta G.B.Sowerby I, 1846 – described by Sowerby, GB (1846) and illustrated by Sowerby, GB (1847), Reeve (1865) and Veldsman S.G. (2013b);

Marginella albospira S.G.Veldsman, 2013 – discussed and illustrated in Veldsman S.G. (2013b);

Marginella arcanus S.G.Veldsman, Aiken & J.H.Veldsman, 2014 – discussed and illustrated in Veldsman SG *et al.* (2014);

Marginella evansorum J.H.Veldsman, S.G.Veldsman & Aiken, 2012 – discussed and illustrated in Veldsman J.H. *et al.* (2012) and Veldsman S.G. & Aiken (2015);

Marginella falsabayensis J.H.Veldsman & S.G.Veldsman, 2012 – discussed and illustrated in Veldsman JH & Veldsman SG (2012) and Veldsman S.G. & Veldsman J.H. (2014);

Marginella fuscipicta Turton, 1932 – discussed and illustrated in Turton (1932) and Veldsman S.G. (2013a);

Marginella joanmassierae Bozzetti, 1992 – discussed and illustrated in Bozzetti (1992);

Marginella lutea G.B.Sowerby III, 1889 – discussed and illustrated in Veldsman S.G. (2015);

Marginella maculata S.G.Veldsman, 2013 – discussed and illustrated in Veldsman S.G. (2013a);

Marginella monozona Turton, 1932 – discussed and illustrated in Turton (1932) and Veldsman, S.G. (2014a);

Marginella obliquum S.G.Veldsman, Aiken & J.H.Veldsman, 2014 – discussed and illustrated in Veldsman S.G. *et al.* (2014);

Marginella piperata Hinds, 1844 – described in Hinds (1844), discussed and illustrated in Veldsman S.G. *et al.* (2014) and Veldsman, S.G. (2015);

Marginella puniceus S.G.Veldsman, 2014 – discussed and illustrated in Veldsman, S.G. (2014a);

Marginella roseafasciata Massier, 1993 – discussed and illustrated in Massier (1993) and Lussi (2013);

Marginella tentoria Lussi, 2013 – discussed and illustrated in Lussi (2013);

Marginella textilis S.G.Veldsman & J.H.Veldsman, 2014 – discussed and illustrated in Veldsman S.G. & Veldsman J.H. (2014);

Marginella velliesi S.G.Veldsman & Aiken, 2015 – discussed and illustrated in Veldsman S.G. & Aiken (2015).

All of these shells are mainly fusiform-oval, has no labial denticles and or posterior notch developed, and callus slightly developed on columella. But none of these species compare to *M. martiae* regarding over-all appearance and color pattern.

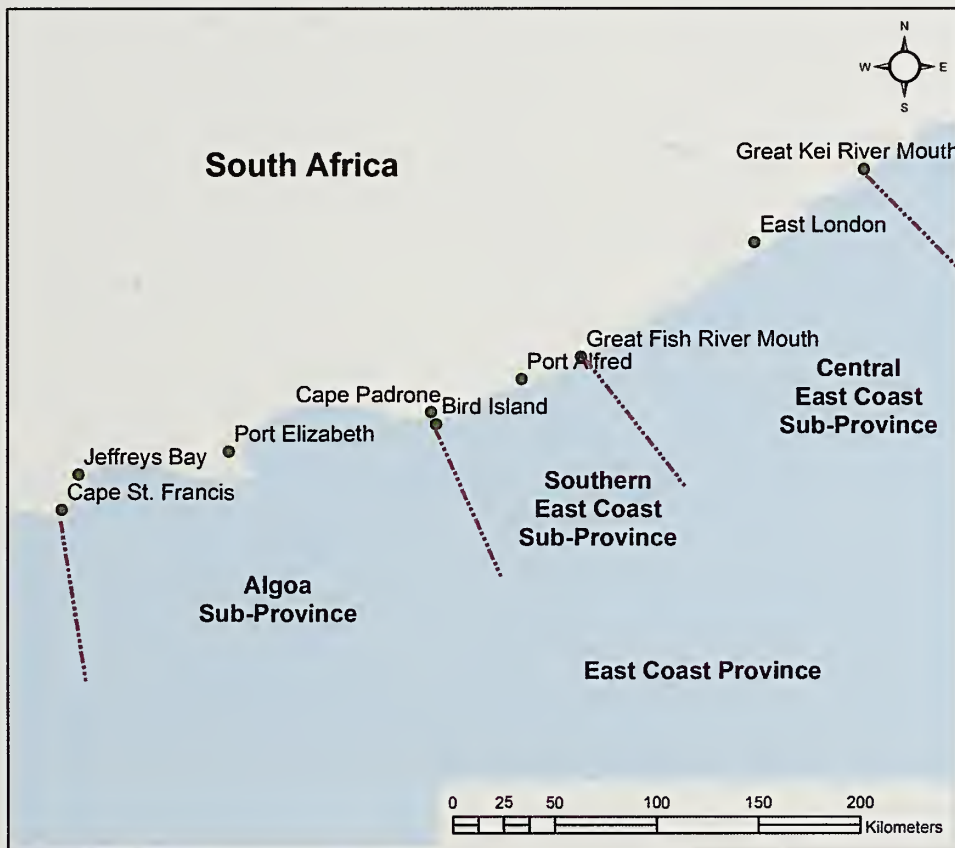


Figure 1. The Central East Coast Sub-Province to the Algoa Sub-Province, East Coast Province, illustration of the Sub-Provinces and major towns where specimens were collected (modified after Veldsman S.G. 2014b & 2014c).

Marginella martiae n. sp.
(Figures 2.1, 3.1 to 3.4)

Description: The shell is moderately large in size (average 16mm), broadly biconical. Shell surface smooth, spire low (approximately 24% of shell length). Round apex, light grey in color. No labial denticles or posterior notch present. Columella with four continuous plications, making up more than half of the columella, with lower, fourth plica ending at the lower edge of shell. Little callus present. Aperture broad, off-white to slightly cream in color, straight lip. Spire off-white to grey background, broad dark grey band around spire with small off-white block-like markings, with a very thin lighter colored thin band on the lower portion around spire. Background color of the body whorl off-white to light grey with plenty of thin bands of cream to light brown markings, sometimes a dark grey. Coloration of bands are as follow: a very light, but not prominent thinner patterned band below shoulder, followed by a darker broad patterned band, followed by a thinner patterned band ending at base with a broad dark patterned band. Reddish marking visible on lower plicae. Moderately thick lip, reddish-brown markings on the outer margin.

The Holotype of *M. martiae* is illustrated in Figure 2.1, and has been donated to the Natal Museum, South Africa (NMSA), ID Number: P0991/T4219.

Type and distribution: Type locality of the Holotype of *M. martiae* is off the coast of Port Elizabeth (33°51.5'S & 25°44.1'E), Algoa Sub-Province, East Coast Province, South Africa, scuba at a depth of 25m.

This species have so far only been recorded in the Algoa Sub-Province, East Coast Province.

Specimens were collected on the beach and from depths of 15-65m.

The Holotype of *M. martiae* is illustrated in Figure 2.1. The type material is as follows:

- Holotype: 16.23 x 9.40 mm (Figure 2.1); Port Elizabeth (33°51.5'S & 25°44.1'E), Algoa Sub-Province; Scuba 25m, on sand; Coll. Natal Museum South Africa (NMSA), ID No: P0991/T4219. Donated by S.G. Veldsman.
- Paratype 1: 16.85 x 9.23 mm (Figure 3.1); Jeffreys Bay, Algoa Sub-Province; Dredged 65m; Veldsman Collection.
- Paratype 2: 16.03 x 8.71 mm (Figure 3.2); Jeffreys Bay, Algoa Sub-Province; Dredged 65m; Veldsman Collection.
- Paratype 3: 16.03 x 8.71 mm (Figure 3.3); Port Elizabeth, Algoa Sub-Province; Scuba 25m; Veldsman Collection.
- Paratype 4: 15.39 x 8.32 mm; Port Elizabeth, Algoa Sub-Province; Scuba 25m; Veldsman Collection.
- Paratype 5: 14.74 x 8.37 mm (Figure 3.4); Port Elizabeth, Algoa Sub-Province; Scuba 25m; Veldsman Collection.
- Paratype 6: 15.78 x 8.77 mm; Jeffreys Bay, Algoa Sub-Province; Dredged 65m; Aiken Collection, donated by S.G. Veldsman.
- Paratype 7: 16.06 x 8.90 mm; Jeffreys Bay, Algoa Sub-Province; Scuba 15-20m; Veldsman Collection.
- Paratype 8: 15.23 x 8.58 mm; Jeffreys Bay, Algoa Sub-Province; Dredged 65m; Veldsman Collection.

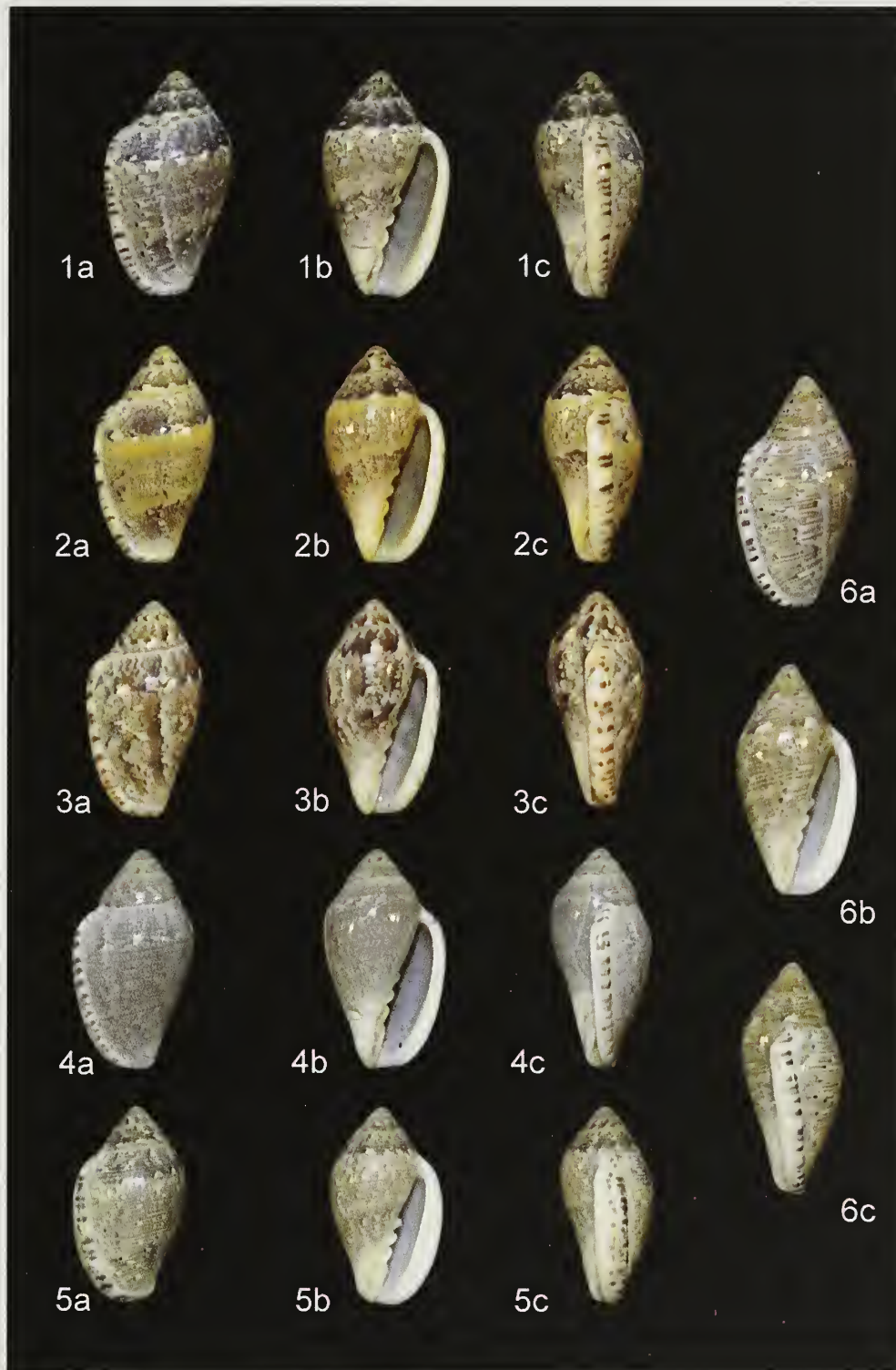


Figure 2. 1. *Marginella martiae* (16.23 x 9.40 mm) – Holotype; Port Elizabeth, scuba 25m; Coll. Natal Museum South Africa (NMSA), ID No: P0991/T4219. 2. *M. scitula* (15.78 x 8.74 mm); Port Elizabeth, scuba 25m; Veldsman Collection. 3. *M. rubrocincta* (15.64 x 8.49 mm); Cape St. Francis, dredged 65m; Veldsman Collection. 4. *M. viljoenae* (15.88 x 8.86 mm); Port Elizabeth, scuba 15-20m; Veldsman Collection. 5. *M. philipi* (14.08 x 8.19 mm); East London, dredged 95-100m; Veldsman Collection. 6. *M. millardi* (16.69 x 8.79 mm); Port Elizabeth, scuba 25m; Veldsman Collection.



Figure 3. *Marginella martiae*: 1. Paratype 1 (16.85 x 9.23 mm); Jeffreys Bay, dredged 65m; Veldsman Collection. 2. Paratype 2 (16.03 x 8.71 mm); Jeffreys Bay, dredged 65m; Veldsman Collection. 3. Paratype 3 (16.03 x 8.71 mm); Port Elizabeth, scuba 25m; Veldsman Collection. 4. Paratype 5 (14.74 x 8.37 mm); Port Elizabeth, scuba 25m; Veldsman Collection.

Paratype 9: 15.12 x 8.49 mm; Port Elizabeth, Algoa Sub-Province; Scuba 15m; Veldsman Collection.

Paratype 10: 16.23 x 9.04 mm; Jeffreys Bay, Algoa Sub-Province; Beach collected; Veldsman Collection.

Paratype 11: 15.41 x 8.29 mm; Port Elizabeth, Algoa Sub-Province; Scuba 15m; Veldsman Collection.

Paratype 12: 16.73 x 9.26 mm; Port Elizabeth, Algoa Sub-Province; Scuba 15m; Veldsman Collection.

Paratype 13: 16.54 x 8.99 mm; Jeffreys Bay, Algoa Sub-Province; Dredged 65m; Aiken Collection.

Paratype 14: 15.42 x 8.68 mm; Jeffreys Bay, Algoa Sub-Province; Dredged 65m; Aiken Collection.

- Paratype 15: 15.52 x 8.53 mm; Jeffreys Bay, Algoa Sub-Province; Dredged 65m; Aiken Collection.
- Paratype 16: 16.50 x 9.00 mm; Port Elizabeth, Algoa Sub-Province; Scuba 25m; Veldsman Collection.
- Paratype 17: 16.66 x 8.80 mm; Port Elizabeth, Algoa Sub-Province; Scuba 12m; Veldsman Collection.
- Paratype 18: 15.36 x 8.66 mm; Port Elizabeth, Algoa Sub-Province; Scuba 25m; Veldsman Collection.
- Paratype 19: 14.28 x 8.53 mm; Port Elizabeth, Algoa Sub-Province; Scuba 15m; Veldsman Collection.

- Paratype 20: 15.69 x 8.84 mm; Jeffreys Bay, Algoa Sub-Province; Beach collected; Veldsman Collection.

Etymology: This species is named in honour of the late Martie Jooste, wife of the late Arie Jooste and mother of friend and shell diver, Philip Jooste.

Discussion: The new species, *Marginella martiae* is on average the same size than the other species compared to. The species are compared to each other in more detail in Tables 1 and Table 2.

	<i>M. martiae</i>	<i>M. scitula</i>	<i>M. rubrocincta</i>
Spire	Spire low.	Moderately high spire.	Moderately high spire.
Shoulder and aperture	Wide, rounded shoulder. Wide aperture.	Moderately wide, slightly rounded to angular shoulder. Moderately wide aperture	Moderately wide, slightly rounded to angular shoulder. Narrow aperture
Plicae characteristic and coloration	Plicae ending at base. Reddish marking on last plicae ending at base.	Plicae ending at base. Cream to yellowish marking on last two plicae ending at base.	Plicae ending at base. Reddish marking on last plicae ending at base.
Lip markings	Lip off-white to cream, red-brown markings upper side of the lip.	Lip cream to yellowish, brown markings upper side of the lip.	Lip off-white, reddish markings on both sides of the lip. Mostly faded below.
Spire coloration	Off-white to grey background, broad dark grey band around spire with small off-white block-like markings, with a very thin lighter colored thin band on the lower portion around spire.	Creamy to yellowish background, broad dark brown band around spire with small off-white block-like markings.	Off-white background, wavy pinkish to red-brown markings separated by block-like markings.
Body-whorl coloration and pattern	Off-white to light grey background with plenty of thin bands of cream to light brown markings, sometimes a dark grey. Coloration of bands are as follow: a very light, but not prominent thinner patterned band below shoulder, followed by a darker broad patterned band, followed by a thinner patterned band ending at base with a broad dark patterned band.	Light cream to yellowish background. Coloration of bands are as follow: a thin prominent band (cream to yellowish) below shoulder, followed by a darker broad patterned band, followed by a thin prominent band (cream to yellowish), followed by broad dark patterned band ending at base.	Background color is off-white with fine criss-cross pattern, sometimes presented as broad bands, pinkish to re-brown block-like pattern.

Table 1. Comparison between *Marginella martiae*, *M. scitula* and *M. rubrocincta*.

	<i>M. viljoenae</i>	<i>M. philipi</i>	<i>M. millardi</i>
Spire	Moderately high spire.	Spire low.	Spire high.
Shoulder and aperture	Wide, slightly curved rounded shoulder. Wide aperture.	Narrow, curved rounded shoulder. Narrow aperture.	Moderately wide, very curved slightly angular shoulder. Moderately wide aperture.
Plicae characteristic and coloration	Plicae ending at base. Reddish marking on last plicae ending at base.	Plicae ending at base. No markings on plicae.	Space between the fourth plicae and the base. No markings on plicae.
Lip markings	Lip off-white, red-brown markings upper side of the lip.	Lip off-white, dark grey markings upper side of the lip.	Lip off-white, dark grey to brown markings upper side of the lip.
Spire coloration	Axially striped light grey block-like markings all around the spire.	Full color pattern, with a block-like pattern consisting of red-brown blocks with white and black inserted spots.	Axially striped brown markings on dorsal side becoming a thick dark brown with black markings band on the aperture side.
Body-whorl coloration and pattern	Off-white to light grey background, plenty thin bands of light grey markings in a very fine block-like pattern, consistent across the body body-whorl, with no prominent lighter or darker bands visible.	Off-white to light grey background, plenty thin bands of light brown to grey markings in a very fine block-like pattern, a darker zone is visible on lower portion of dorsal side, ending at base. Light thin line is sometimes visible around the middle.	Off-white to light creamy background, plenty thin bands of light brown markings in a very fine block-like pattern, presented in a wave like pattern. A light patterned band is visible around the middle.

Table 2. Comparison between *Marginella viljoenae*, *M. philipi* and *M. millardi*.

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